DOCUMENT RESUME

ED 077 367 HE 004 163

AUTHOR	Peters, Dianne S.
TITLE	Faculty Views of Curriculum and Instruction: A Research Report.
INSTITUTION	Texas Tech Univ., Lubbock. Inst. for the Improvement of Undergraduate Education.
PUB DATE	Sep 72
NOTE	89p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*College Faculty; *Curriculum; *Higher Education; *Instructional Design; Professors; *Teacher Attitudes; Teacher Characteristics

ABSTRACT

The purpose of this investigation was to ascertain attitudes of university faculty toward curriculum and instructional techniques, and to discover the patterns of interrelationships between such attitudinal patterns. In general, the findings indicate that those faculty who tend to hold traditional and/or structured attitudes toward curriculum, who tend to use formal instructional techniques, and who exhibit a formal, nominal, and thing-oriented language pattern are usually from the Natural Sciences. By contrast, those faculty whose views of curriculum are nontraditional and/or nonstructured, whose instructional techniques tend toward the informal, and whose language pattern tends toward informality, verbality, and people-orientation are also from the same groups -- Social Sciences and Humanities. The implications of this research suggest that the interrelationship between the faculty's working environment and their attitudes toward curriculum and instruction, which do differ by academic area, must be considered when a university plans for its future. The findings also suggest that administrative personnel practices should focus more on the concept of equitability than on equality in curricular determinations, in evaluating teaching effectiveness, and in student-faculty relationships. (Author/HS)

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FACULTY VIEWS OF CURRICULUM AND INSTRUCTION: A RESEARCH REPORT

From a research project entitled "A Descriptive Analysis of University Faculty Attitudes Toward Curriculum and Instruction in Undergraduate Education," funded by Texas Tech University under the Institute for the Improvement of Undergraduate Education

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Dianne S. Peters

Assistant Professor
Higher Education

September, 1972

ABSTRACT

Faculty Views of Curriculum and Instruction

The purpose of this investigation was to ascertain attitudes of university faculty toward curriculum and instructional techniques, and to discover the patterns of interrelationships between such attitudinal patterns.

Analysis of data denied three null hypotheses:

1. There are no significant differences in attitudes toward the concept of curriculum among six teaching orientations.

2. There are no significant differences in attitudes toward the use of instructional techniques among six teaching orientations.

3. There are no significant differences in the structure of faculty speech patterns among six teaching orientations.

Not only do faculty demonstrate patterns of significant differences in their attitudes toward curriculum and instruction, but also they have differences in their language patterns. Moreover, all these patterns tend to be congruent with one another.

In general, the findings indicate that those faculty who tend to hold traditional and/or structured attitudes toward curriculum, who tend to use formal instructional techniques, and who exhibit a formal, nominal, and thing-oriented language pattern are usually the same faculty -- Natural Sciences. By contrast, those faculty whose views of curriculum are non-traditional and/or non-structured, whose instructional techniques tend toward the informal, and whose language pattern tends toward informality, verbality, and people-orientation are also the same groups -- Social Sciences and Humanities. Furthermore, the findings suggest that a four-way classification schema is more descriptive than

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either a three- or a six-way schema: Natural Sciences, Social Humanities, "Operational" (e.g., accounting), and "Enterprising" (e.g., history).

The implications of the above research suggest that the interrelationship between the faculty's working environment and their attitudes toward curriculum and instruction, which do differ by academic area, must be considered when a university plans for its future. More important, however, the findings suggest that administrative personnel practices should focus more on the concept of equitability than on equality in curricular determinations, in evaluating teaching effectiveness, and in student-faculty relationships.

Dianne S. Peters

ACKNOWLEDGMENTS

Whatever success this investigation enjoys must come first from its participants. Talking with the faculty from the six teaching orientations at Texas Tech University, in Lubbock, was a most worthwhile opportunity. Their willingness to participate by responding to the questionnaire instruments, their candor during the taped-interview sessions, and their witty commentary all combined to make the research a delightful enterprise. To these colleagues, I express my appreciation.

In addition, I am grateful to the Institute for the Improvement of Undergraduate Education, at Texas Tech University, and to the Research Committee of the University's College of Education for awarding me the funds necessary to undertake the research.

This hierarchy of acknowledgements would not be complete without a word of appreciation to several colleagues at the University. I am indebted to Kenneth H. Freeman, chairman of Higher Education, for his support and encouraging insistence that I clarify my ideas on the prospectus. Next, whatever enlightenment is provided by the statistical analyses of this report is due almost entirely to my colleagues Welborn Willingham, and, especially, Joe D. Cornett. Their advice and counsel were of inestimable value. I am also grateful to Bob Haynes and Bill Coberly of the University's Computer Center for setting up and running the computer programs.

I am especially indebted to my friend and colleague Robert T. Blackburn of the University of Michigan. From the inception of the proposal to the final writing of the report, his substantial critical commentary was a constant source of strength.

Finally, I am grateful to my research associate Charles L. Fewell. His eagerness to learn research techniques, his capacity to attend to the details, his promptness in meeting the interviews assigned to him, his good nature, and his willingness to thrash out the problems inherent in the preliminary analysis of data made it possible to coordinate the research efforts. I am grateful to him, too, for his patient forbearance and his sense of humor that maintained a sense of balance to the whole.

Dianne S. Peters

Lubbock, Texas
October, 1972

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SECTION ONE: OVERVIEW

CHAPTER I

SOME GENERAL BACKGROUND

Purpose and Description

The purpose of this investigation is twofold: to ascertain the attitudes of university faculty toward the concept of curriculum and the use of instructional techniques, and to discover the ways in which the patterns of these attitudes tend to interrelate.

The investigation provides three separate analyses. The first analysis describes faculty responses to a series of questions eliciting information about their views on curriculum and instruction. The second analysis is sociolinguistic, and it concerns the structure of the language used by the respondents to encode their views on curriculum and instruction. It is generally predicted that these two analyses will produce congruent patterns. Such congruent patterns will be confirmed or denied by means of a semantic differential as a corroborating instrument. This corroboration, then, comprises the third analysis.

Review of the Literature

Of all the factors that have a bearing on faculty behavior, attitudes, and performance, one of the most important is that of academic discipline. Several studies in the literature speak to this idea and, in general, lead one to conclude that "the danger of talking about all academic men as being the same leads to serious errors" (Blackburn, 1971).

For example, it has been established that there are significant differences among faculty in academic disciplines (Brown, 1967). More particularly, with regard to the evaluation of faculty performance, there are a number of studies to underscore the differences. Eckert and Steck-lein (1961) found that faculty allocate different periods of time for different activities according to their disciplines. As well, Hoyt (1970) reported differences in disciplines in terms of promotion and merit raises, and Lehman (1953) found that the age of achievement differs significantly by academic disciplines.

Other studies, too, demonstrate that there are differences between faculty according to their disciplines. One area of concern in this regard is faculty-student interaction. Deshpands, Webb, and Marks (1970) reported that structure, rather than interaction, is more important in engineering, while Gamson (1967) found that student-faculty interaction in the social sciences exists more on a person-to-person basis than it does in the natural sciences. In addition, the differences among faculty in the disciplines is related to significant differences having an effect on student aspirations in those disciplines (Thistlethwaite and Wheeler, 1966).

In all, it is not an exaggeration to state that what academic discipline a faculty member belongs to is a most important influencing factor. However, defining the term "academic discipline" is not without some difficulty because there are several systems for such classification.

The first of these is C.P. Snow's classic The Two Cultures (1964) which proposes a two-fold division into the sciences and the humanities. Another schema describes three groups of faculty -- natural sciences, social sciences, and humanities (Peters, 1969; Parsons and Platt, 1968;

Bell, 1966). Still another classification is suggested by Ford and Pugno (1964) which describes four academic areas -- natural sciences, mathematics, English, and social sciences. Most of these systems of classification are based on traditional concepts of the structure of the discipline's content, and the merits and/or deficiences of such a perspective are eminently debatable (see Jencks and Riesman, 1968, 523-530).

Another point of view, however, considers faculty as personality types within academic areas, and such a viewpoint seems to allow for more penetrating analyses. This perspective stems from the idea of campus climate, a frame of reference growing out of studies by Astin (1962), Pace (1963) and Holland (1966). It is Holland who groups faculty by personality type and academic discipline, and whose theory forms the basis for the research design of the present investigation.

The Research Design

According to Holland (1966), teaching faculty in the several areas of instruction combine to make up what he calls orientations. He describes six of these orientations as basic types (Holland, 1966, 15-41). They are:

Realistic Orientation. These faculty tend to lack verbal and interpersonal skills, to prefer the concrete to the abstract, and to be unsocial, but otherwise conventional.

Investigative Orientation. These faculty tend to be task oriented, to be comfortable with ambiguity, to hold unconventional values and attitudes, to think out (rather than to act out) solutions to problems, and, in general, to be asocial.

Social Orientation. These faculty tend to have both verbal and interpersonal skills, to avoid intellectual problems and highly structured social activi-

ies, and to solve problems by means of interpersonal manipulations.

Conventional Orientation. These faculty tend to prefer structured verbal and numerical activities, to be conforming and subordinate, to avoid ambiguity, to avoid being involved in interpersonal relationships, and to identify with the concepts of power and status.

Enterprising Orientation. These faculty tend to have considerable verbal skill, to prefer ambiguity, to conform to conventional value systems, and to be somewhat more concerned with the concepts of power and status than the "Conventional Orientation."

Artistic Orientation. These faculty tend to avoid highly structured situations, to be asocial, non-conforming, and emotional, and to value individualistic, original, and creative expression.

For each orientation, Holland further suggests appropriate academic disciplines or teaching fields (Holland, 1966, 110-116). By utilizing two such teaching fields from each orientation, it can be discovered if Holland's theory is valid and reliable when it is applied specifically to the professoriate. Consequently, to sample twelve teaching fields or academic disciplines, two for each orientation, is to set up a grid which provides for appropriate analysis. A listing of the twelve teaching fields on the vertical axis and a listing of the six orientations across the horizontal axis produces the following diagram in Figure 1.

Figure 1

THE BASIC GRID

Teaching Field	Orientation					
	Realistic	Investigative	Social	Conventional	Enterprising	Artistic
Engineering	x					
Agriculture	x					
Chemistry		x				
Mathematics		x				
Education			x			
Psychology			x			
Accounting				x		
Economics				x		
Gov't-History					x	
Business & Management					x	
English						x
Speech						x

Ultimately, analyses of data can ascertain if the six orientations constitute an appropriate classification schema for university faculty.

CHAPTER II

THE DATA AND THEIR TREATMENT

The Sample

It is not only of some importance to provide an institutional setting for the faculty to be studied, but also reasonable to choose the kind of institution which is relatively stable, representative of American higher education as a whole, and healthy in the sense that its development is evolutionary rather than revolutionary. Such an institutional type is the emerging state university. In these institutions there is a meeting ground for the older liberal arts scholarly tradition, the newer and more pragmatic schools of thought, and the new technology. Faculty at a large southwestern state university, then, provide the sample of respondents for the present study.

Ninety-eight male faculty members at the university comprise the sample of respondents. These respondents are grouped according to the six orientations and twelve teaching fields depicted in the Basic Grid (see Figure 1). The number of respondents in each orientation is as follows:

Realistic Orientation (RO, engineering and agriculture), N = 20.

Investigative Orientation (IO, chemistry and mathematics), N = 10.

Social Orientation (SO, education and psychology), N = 26.

Conventional Orientation (CO, accounting and economics), N = 13.

Enterprising Orientation (EO, history-government and business management), N = 17.

Artistic Orientation (AO, English and speech), N = 12.

With the exception of the Investigative Orientation (IO), there are at least five respondents in each of the twelve teaching fields. Because there were only two respondents from mathematics who agreed to participate in the study, it was necessary to eliminate that teaching field from the analyses, and so the Investigative Orientation (IO) is represented only by chemistry as an academic discipline.

The percentage of respondents in each of these six orientations is in the same ratio as it is to the academic offerings of the entire university.

The Hypotheses

On the basis of Holland's theory that faculty in higher education can be categorized into personality types according to teaching orientations or academic disciplines, it is expected that their attitudes toward the concepts of curriculum and their use of instructional techniques will also differ along these same lines. For example, it can be postulated that the Realistic (RO) and Conventional (CO) Orientations exhibit relatively traditional attitudes toward curriculum that define the concept in terms of its content. Accordingly, these same orientations are likely to utilize such traditional teaching techniques as lecture, lecture-discussion, and task-oriented laboratory exercises. In other words, faculty in the RO and CO are conventional and structured; their attitudes toward curriculum and instruction tend not to include interaction between themselves and students whenever student, subject matter, and professor come together for the purpose of gaining intellectual competence.

By contrast, it can also be postulated that faculty in the Social (SO) and Artistic (AO) Orientations demonstrate relatively non-traditional attitudes toward curriculum that define the concept in terms, not of con-

tent, but of the interaction of an individual with the subject to be learned. Accordingly, these teaching orientations are likely to utilize a wide array of instructional techniques that include not only lecture-discussion, but also small-group discussion, case-studies, audio-visual media, and audio-tutorial instruction. In other words, these faculty are likely to construe curriculum as an individual and social experience that not only includes, but also goes beyond the parameters of the strictly intellectual or academic, and to utilize those techniques in their teaching that allow for personalized and social interaction between and among individuals.

In essence, then, there is postulated a continuum of attitudes toward curriculum and instruction. At the conventional, traditional, content-centered, or structured pole will be faculty in the Realistic and Conventional Orientations. At the non-structured, innovative, or student-centered pole will be the Artistic and Social Orientations. Faculty in the Investigative and Enterprising Orientations are expected to fall along the mid-range of the continuum.

In order to simplify these expectations for the purpose of statistical analysis, three null hypotheses are stated:

1. There are no significant differences in attitudes toward the concept of curriculum among the six teaching orientations.
2. There are no significant differences in attitudes toward the use of instructional techniques among the six teaching orientations.
3. There are no significant differences in the structure of faculty speech patterns among the six teaching orientations.

The Methodology

Three kinds of information comprise the data-base for this study. One is substantive, one is non-substantive, and the last is corroborating.

The substantive portion of the data is represented by two content analyses. The first content analysis concerns the general responses to a questionnaire (see Appendix A), and the second content analysis reports that information concerning curriculum and instructional techniques derived from tape-recorded interview sessions (see Appendix B for a list of questions asked). These data focus on content, on that kind of substantive information which has meaning for the groups involved, and from these data are inferred attitudes. These substantive data speak to the first two hypotheses. Essentially, the hypotheses asks if faculty attitudes toward the concept of curriculum and toward the use of instructional techniques are different, and, if different, whether the attitudes are dependent on or independent of teaching orientation.

The non-substantive portion of the data-base is a sociolinguistic analysis. As the term implies, such an analysis combines elements of sociology and linguistics in a way that demonstrates the interrelationships between language and that element (group) of a society who speak it.* In short, sociolinguistic data here focus on the structural or grammatical components of speech.+ That is to say, the sociolinguistic data produce structural patterns, and these data speak to the last hypothesis. Essentially, the hypothesis asks if the speech patterns are structurally differ-

*That there is an interrelationship between language and society is the subject of the Whorfian hypothesis; however, that interrelationship is not casual. Quite simply, the importance of Whorf's thesis for the present study means that the data of the language characteristic of specified groups (the six teaching orientations) are interrelated with the data of their attitudes and behavior. See John B. Carroll, ed. (1956); and Brown and Lenneberg (1954).

+For the theory of comparable structural patterns in language and society see Levi-Strauss (1955); and Kenneth Pike (1960). For an application of this theory to higher education, see Peters, (1971).

ent, and, if different, whether the differences are co-terminous with teaching orientation. From such data analysis are inferred attitudes.

The last portion of the data-base is that which corroborates the other two sections of the data. Specifically, such corroborating data seeks to confirm the results of the content (substantive) and the structural (non-substantive) analyses. The information comes from an instrument called the Semantic Differential (see Appendix C). Conceived by a trio of psycholinguists (Osgood, Suci, and Tannenbaum, 1957), the Semantic Differential is a rating scale that designates the connotative features of a word, or, by extension, a situation, by means of bipolar adjectives. A respondent reacts to a situation by means of these bipolar adjectives, and so evaluates it in terms of what it means to him psychologically. From these data, attitudes are inferred, and, essentially, such inferences confirm or deny whether the hypotheses are to be accepted or rejected according to previous data.

SECTION TWO: FINDINGS

CHAPTER III

THE CONTENT ANALYSES

Two sets of data constitute the content analyses. The first concerns information derived from the questionnaire (see Appendix A), and the second reports that information concerning curriculum and the use of instructional techniques derived from tape-recorded interview sessions (see Appendix B).

The Questionnaire

Some Basic Relationships

The first results from the questionnaire demonstrate the general relationships along three lines of faculty performance -- those who utilize student ratings of their teaching, those who have published books and articles (within the last four years) in the professional literature of their academic orientations, and those who receive institutional (e.g., an academic fraternity) or campus (e.g., a professional chair and/or cash for "outstanding service to teaching") recognition for outstanding teaching. Table I presents these data in terms of individual factors and the factors in combination.

(insert Table 1 about here)

The data in Table 1 indicate that approximately 80 percent of the respondents uses student ratings of teaching, while 20 percent does not. A similar proportion occurs in publications. However, only 20 percent of the sample has received teaching awards, while 80 percent has not. Combinations of factors demonstrate that 60 respondents, of 98, answer positively to using student ratings and to being published, while only 4 answer negatively to both. Generally, a similar proportion of positive and negat-

Table 1

A NUMERICAL DISTRIBUTION OF POSITIVE AND NEGATIVE RESPONSES AMONG THREE RELATED FACTORS OF FACULTY PERFORMANCE

Factor	Response	
	Positive	Negative
Use of Student Rating	77	21
Publications	77	21
Teaching Awards	20	78
Student Ratings and Publications*	60	4
Student Ratings and Teaching Awards*	19	20
Publications and Teaching Awards*	14	16
Student Ratings, Publications and Teaching Awards*	13	5

*The sum of positive and negative responses in this factor is less than 98 because the table does not account for a mixed positive-negative response; i.e., only those respondents answering all "yes" or all "no" are included in this portion of the table.

ive responses occurs in the combined factors of Student Ratings-Teaching Awards and Publications-Teaching Awards. However, only 13 of the 98 respondents answer positively to all three combined factors, and only 5 (of 98) answer negatively to the combination of three factors.[1]

The Four Clusters

Another set of findings from the questionnaire can be classified in four clusters: (1) The Campus Scene (Questions 1 and 2 on favorable and problematic areas on the university campus), (2) The University Student (Questions 3-5 describing the "typical," the "least capable," and "adequate" student performance in a subject field), (3) The Teaching Role (Questions 6-8 describing the professorial role, "effective" teaching, and objectivity in testing and evaluation) and (4) The Curriculum (Questions 9-11 describing the "least-most relevant" curriculum and defining that term).

In general, the chi-square test for independence on each of the four clusters produced two findings. Analyses of Clusters 1 and 4 proved that faculty attitudes in these areas are related to teaching orientation; that is, faculty views of the campus enviornment and of curriculum relate significantly to teaching orientation. Analyses of Clusters 2 and 3, however, proved that faculty attitudes toward the students at the university and toward the teaching role in general are independent of teaching orientation.

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[1] Just as a series of contingency tables within Table 1 might produce significances, so might a further tabulation of data indicating the combination of positive and negative responses for each combination of related factors also produce significances. However, such analyses are probably tangential, at best, to the central thrust of this investigation. Nonetheless including these data, gross as they are, can begin to prove helpful to those researchers whose purposes are more directly related to faculty productivity.

Cluster 1, The Campus Scene: Responses to the questions in this cluster were collapsed in terms of favorable and unfavorable attitudes. A chi-square analysis demonstrated that faculty attitudes toward the campus climate are related to teaching field, and this finding is significant at the .05 level of confidence. Table 2 presents these data.

Table 2

A PERCENTAGE DISTRIBUTION OF FACULTY ATTITUDES TOWARD THE CAMPUS SCENE

Response	Orientation					
	RO	IO	SO	CO	EO	AO
Favorable	44%	24%	65%	53%	50%	50%
Unfavorable	56%	76%	35%	48%	50%	50%

$X^2 = 13.76$ P= .05

More particularly, there are two trends indicating what faculty find as unfavorable. Generally, most faculty perceive problems in the area of administrative policies and practices, but because the data are gross, one cannot pinpoint the level of administration -- university, college, or departmental -- that the respondents find as flawed. As well, faculty look to student apathy as a problem area, and this is the secondary unfavorable trend. The primary trend describing what faculty regard as positive lies in faculty interaction across and within departmental lines.

There are two exceptions to these general trends, and these are related to teaching orientation. On the one hand, faculty in the Social Orientation (SO) tend neither to regard administrative policies and practices as arbitrary or unfavorable nor to point to student apathy as a problem. On the other hand, faculty in the Artistic Orientation (AO) report a negative

sense of faculty aloofness rather than a positive sense of faculty interaction across and within teaching orientations.

Cluster 4, the Curriculum: The chi-square test for independence demonstrates that faculty attitudes toward, and definitions of, the term "curriculum" relate to teaching orientation. Table 3 presents these data.

Table 3

A PERCENTAGE DISTRIBUTION OF FACULTY ATTITUDES TOWARD THE CONCEPT OF CURRICULUM

	Orientation					
Response	RO	IO	SO	CO	EO	AO
Non-Structured	49%	26%	64%	50%	48%	47%
Structured	51%	74%	36%	50%	52%	53%
$X^2 = 22.84$	P = .01					

Responses to the questions on curriculum were collapsed in terms of "non-structured" and "structured". Whether a faculty member has a relatively non-structured or structured view of curriculum is related to his teaching orientation, and this finding is significant well beyond the .01 level.

Furthermore, chi-square tests within the six orientations of this cluster demonstrated that those faculty in the Investigative Orientation (IO) are significantly more structured in their conception of curriculum than their colleagues in the Social Orientation (SO) who are relatively non-structured. Although these data are not tabulated here, the difference between teaching orientations is significant beyond the .05 level of confidence.

The Taped-Interview Sessions

The second set of content analyses derive from taped-interview sessions, and this set has two parts. The first part concerns the word "curriculum," conceptions of which have already demonstrated significant differences according to teaching orientations, and so the content analysis of the taped sessions simply provide more details. The second analysis concerns the instructional techniques which are used by faculty in the six teaching orientations.

Attitudes Toward Curriculum

During the interview sessions, when the respondents were asked to define what they mean by the word "curriculum," their definitions, when analyzed, seemed to fall along a continuum. At one end of the line is an academic, structured, or traditional point of view which defines curriculum as a series or a sequence of academic courses, sometimes including electives, leading toward some goal. Those who define curriculum in these "academic" or "structured" terms seem to distinguish between "curriculum" and "extra-curriculum," the former embracing course work in a classroom setting, and the latter including just about everything else from library study and a speakers series to football games and fraternity parties.

At the other end of the continuum is a comprehensive or "non-structured" viewpoint of curriculum that defines the word as the total impact of the college experience on students as a whole. Those who define curriculum in these terms seem not to distinguish between curriculum and extra-curriculum; for them there is no real dividing line between in-class activity and out-of-class activity so long as those activities come under the purview of the institution.

Between these two poles is still another definition that see curriculum occurring both in and out of class, but not to the extent of football games, fraternity parties, or having a coke at the student center. Those respondents falling into this mid-range group distinguish between curriculum and co-curriculum. Often they include speakers series, library study, and sometimes studying over a coke at the student center, and these activities they describe as co-curricular. They also have a category of extra-curriculum which can be encapsulated in the phrase "college days."

The first finding from those portions of the tapes regarding curriculum demonstrates that a university faculty's attitudes toward curriculum are independent of professorial rank.

Given the three definitions of curriculum and the three professorial ranks, a matrix is constructed, the definitions of the term along the vertical axis and the professorial ranks along the horizontal axis. Data within this grid are presented in Table 4.

Table 4

PERCENTAGE RESPONSES OF THREE RANKS OF PROFESSORS DEFINING CURRICULUM

	Rank		
Response	Professor N=40	Associate N=28	Assistant N=30
Structured	57%	33.3%	47%
Mid-Range	13%	22.3%	13%
Non-Structured	30%	44.3%	40%

$X^2 = 1.82$; n.s.

The data in Table 4 indicate that full professors are a little more likely to define curriculum in structured terms than are those in the

other ranks. Also, associate professors are more likely to define curriculum in non-structured terms than are those in either the full or assistant ranks. Further, the respondents in this sample are less likely to define curriculum in the mid-range category; instead, they tend to approach one pole or the other. However, since none of these findings is significant, the data in Table 4 demonstrate that faculty definitions of the word "curriculum" are independent of professorial rank.

The next finding also concerns faculty definitions of the word curriculum. However, here the matrix is constructed so that the respondents along the horizontal axis are classified, not by professorial rank, but by teaching orientations. A chi-square test in this case is theoretically impossible, owing to two zero responses. Nevertheless, percentage data of faculty responses, by teaching orientation, in terms of the three definitions are congruent with data from the Questionnaire (see Table 3, p.15). Table 5 presents these data.

Table 5

PERCENTAGE RESPONSES OF SIX TEACHING ORIENTATIONS' DEFINITIONS OF CURRICULUM

	Orientation					
Definition	RO N=20	IO N=10	SO N=26	CO N=13	EO N=17	AO N=12
Non-Structured	10%	0%	68%	31%	35%	42%
Mid-Range	15%	0%	12%	31%	18%	25%
Structured	75%	100%	20%	38%	47%	33%

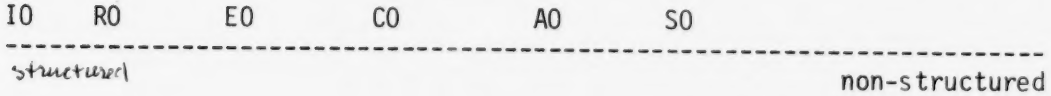
The data here tabularized describe how faculty in the six orientations define the term curriculum. One the one hand, the IO's to a man, and the RO's define the curriculum strictly in terms of the academic

or the structured. On the other hand, the SO's, two-thirds of them, tend to define curriculum as a comprehensive in-class and out-of-class set of activities. The other three orientations divide into three groups. The CO's fall along the continuum fairly evenly. A similar grouping occurs in the AO's, but there a larger group tends to approach the comprehensive or non-structured pole. The EO's are sparcely scattered along the mid-range, but closely dotted near the two poles.

These data in Table 5, which are congruent with earlier findings, suggest that there are at least two and perhaps three potentially controversial viewpoints toward the term curriculum. Other data, which are not presented here, combine with these data and make it possible to chart the six orientations along a continuum line that represents faculty attitudes toward the idea of curriculum. (See Figure 2).

Figure 2

A CONTINUUM OF DEFINITIONS OF CURRICULUM
BY SIX TEACHING ORIENTATIONS



Attitudes Toward the Use of Instructional Techniques

During the interview sessions, when the respondents were asked to talk about what teaching techniques they used in their undergraduate classes, their answers, when analyzed fell into several categories: lecture, lecture-discussion, A-V presentations, case studies, interactive buzz-groups, seminars, individual student presentations, and problem-solving. For purposes of statistical analysis, however, these several categories were collapsed into two descriptive divisions, the formal

(lecture-discussion) and the informal (e.g., buzz-groups and case studies). Chi-square tests for independence demonstrate that whatever instructional technique a faculty member uses is related not to professorial rank, but to what subject he teaches, Table 6 presents part of these data.

Table 6

PERCENTAGE RESPONSES OF FIVE TEACHING ORIENTATIONS INDICATING INSTRUCTIONAL TECHNIQUES USED*

	Orientation				
Instructional Technique	RO	SO	CO	EO	AO
Formal	57%	33%	62%	70%	50%
Informal	43%	67%	38%	30%	50%

$X^2 = 13.28$; $P = .01$.

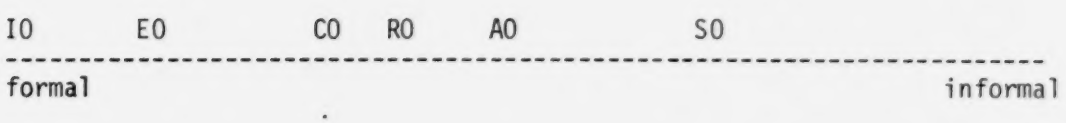
*There are no data from the IO's since all respondents there utilize mainly some form of lecture-discussion (i.e., the "formal" classification).

The data in Table 6 indicate that the SO's are more likely to utilize informal instructional techniques than their colleagues in any of the other orientations. On the other hand, data, not included in Table 6, demonstrate that 100 percent of the IO's use only the formal techniques. The EO's are also more likely to employ formal techniques, and they are joined by CO's and RO's in descending order. The AO's, however, are as likely to use formal techniques as they are informal techniques. Taken collectively, these data demonstrate that the use of instructional techniques is related to teaching orientation, and this finding attains the .01 level of confidence.

This finding makes it possible to chart the six teaching orientations on a continuum that represents faculty attitudes toward instructional techniques. Figure 3 presents this continuum.

Figure 3

A CONTINUUM OF INSTRUCTIONAL TECHNIQUES
BY SIX TEACHING ORIENTATIONS



Summary

In conclusion, findings from the content analyses of the questionnaire (Appendix A) and the taped interview sessions (see Appendix B) demonstrate that faculty attitudes toward curriculum and the use of instructional techniques are related to teaching orientation. Analysis demonstrates that attitudes toward the concept of curriculum are also related to teaching orientation, but not to rank. As well, faculty attitudes toward the use of instructional techniques are related to teaching orientation.

Moreover, there is a congruence between the two findings. Those faculty who tend to define curriculum in structured terms are also likely to use formal instructional techniques, while those defining curriculum in non-structured terms are likely to use informal teaching techniques.

Another finding demonstrates that faculty attitudes toward the campus environment are also related to teaching orientation. At this point, there seems a relationship between attitudes toward the campus climate and attitudes toward curriculum and instruction. However, the exact nature of this relationship is not clear as yet, although later discussions in the structural analyses tend to shed light on this connection.

Nonetheless, it is clear that faculty attitudes toward the concept

of curriculum, the use of instructional techniques, and the campus scene are all related to teaching orientation. Put simply, these five areas of concern are interrelated; they all go together.

CHAPTER IV

THE STRUCTURAL ANALYSES

Without dwelling on the theory and intricacies of sociolinguistic analysis, its methodology yields findings that are related to time, place, and circumstance. In other words, the findings are relative, not absolute; they pertain only to one sample of respondents, and within the sample the groups are compared and/or contrasted only with one another. Moreover, the analyses measure linguistic behavior in terms of non-substantive or structural encoding phenomena. From the results of analyzing such behavioral phenomena, it is possible to infer attitudes.

The analyses proceed from transcripts of uninterrupted respondent speech, which have been edited for consistency especially in terms of the notion of sentence (see Hockett, 1958, 143-144; Longacre (in Blansitt, ed.), 1967, 18; and Jespersen, 1965, 115, 306-308). More precisely, a respondent answers, orally on tape, the question, "Do you discuss teaching techniques with your colleagues?" This speech segment, common to all respondents, is transcribed, and from such transcription the researcher simply tallies countable items -- for example, the number of nouns and verbs -- within a consistently specified word-base of 150 words. These countable items are the data of linguistic behavior, and when these data are arranged in terms of social groups (i.e., the six teaching orientations) they provide for sociolinguistic analysis.

In general, there are two sets of findings in these structural analyses. The first centers around what can be termed "The Cognitive Frame of Reference."

The cognitive frame refers to the point of view from which a group of respondents construe their world, for example, an investigative orientation or point of view or an enterprising one. That is, a cognitive frame is a culture's or a sub-culture's unformalized conception of reality (see Mathiot, 1968,1).

The second set of findings centers around what can be termed "The Social Frame of Reference." The social frame refers generally to the viewpoint from which a group of people construe the people who inhabit their world, for example, a "self" orientation or point of view or an "others." Specifically, the triggering mechanism for the social frame is the personal pronoun, a construct that functions under dichotomous circumstances by linking the abstract properties of the basic grammatical pattern to a matrix of culturally specific elements (see Friedrich (in Bright, ed.), 1966, 214-219; and Peters, 1971). To put it simply, pronouns are an accessible link between grammatical structure and the social group, and their analysis yields findings in "The Social Frame of Reference."

Data analysis for both frames of reference comes from the word-base of 150 words, and within the base there are prescribed countable items (see J.B. Carroll (in Sebeok, ed., 1966), 287). In all, there are 25 such countable items or linguistic variables (see Appendix D). Statistical analysis in the form of the t-test compared all linguistic variables in each of the six teaching orientations with those of all other groups. The results generated significant differences, and on the bases of these differences it is possible to indicate the relative cognitive and social frames of reference for the six teaching orientations.

An initial finding demonstrates that there are no significant differences in any of the 25 linguistic variables between RO's and the CO's. In other words, the RO's and the CO's have similar frames of reference. In essence, this initial finding suggests that whatever findings apply to RO's tend, by inference, to apply to CO's as well.

The Cognitive Frame of Reference

Two sets of findings are applicable to the cognitive frame of reference; one concerns nominality-verbality and the other informality-formality.

Nominality-Verbality

Differences in three related variables (the number of verbs, the number of sentences in the word-base, and the average number of words per sentence) indicate the relative degree of nominality or verbality. Nominality is characterized by the use of more nouns (or fewer verbs) and longer sentences, it tends toward the scientific and impersonal, and it contrasts with the artistic. Verbality, by implication, is that which nominality is not (see Wells (in Sebeok, ed.), 213-220). These data are tabulated in Table 7.

Table 7

LEVELS OF SIGNIFICANT DIFFERENCES, BY ORIENTATIONS, OF NOMINALITY-VERBALITY VARIABLES: F-RATIOS

	Orientations						
Variables	RO-IO	RO-EO	RO-AO	IO-SO	IO-EO	IO-AO	EO-AO
Number of Sentences	.05 RO*	n.s.	n.s.	.05 SO	.01 IO	n.s.	n.s.
Average Number of Words Per Sentence	n.s.	.05 EO	n.s.	n.s.	.05 EO	.05 AO	.05 EO
Number of Verbs	n.s.	n.s.	.05 AO	n.s.	.05 EO	n.s.	n.s.

*The symbol below each significant f-ratio indicates that orientation whose usage of the variable is greater.

The data in Table 7 demonstrate that, on a nominality-verbality continuum, the RO's (and, by inference, the CO's) are the most nominal, the IO's next most nominal. By contrast, the EO's are the most verbal, the AO's the next most verbal. The SO's fall somewhere in the middle, but because the data yield no differences between them and either the EO's or the AO's, one can say only that they tend more toward verbality than the IO's.

Formality-Informality

Differences in one linguistic variable (the number of contractions used) suggest the relative degree of formality-informality. This measure

demonstrates the level of usage, and, as such, it is a stylistic measure. Briefly, levels of usage identify levels of language style; each style (i.e., formal or informal) is appropriate to a situation and/or the persons in it. Whatever level of language style is used by a group of respondents is often a reflection of their frame of mind. Although several linguistic variables indicate the stylistic level (see Joos (in Harrell, ed.), 1961, 109-110) only one variable, the contraction, was found to have significance in the present study. An analysis of this one variable can infer the relative degree of formality or informality in language style of the respondents. Table 8 presents this finding.

Table 8

LEVELS OF SIGNIFICANT DIFFERENCES, BY TEACHING ORIENTATIONS, OF THE FORMALITY-INFORMALITY VARIABLE: F-RATIO

Variable	Orientation		
	RO-SO	RO-EO	RO-AO
Number of Contractions used	.05 SO*	.05 EO	.05 AO

*The symbol below each significant f-ratio indicates that orientation whose usage of the variable is greater.

Based on the theory that the more contractions a group of respondents use, the more informal their language style, the data in Table 8 indicate that the RO's (and, by inference, the CO's) are significantly more formal in their level of usage than the SO's, the EO's, or the AO's. Unfortunately, there are no data to indicate the relative formality or informality of the IO's, nor are there data to distinguish among the SO's, EO's, and AO's. Consequently, this finding suggests that there are two groups of respondents: RO's and, perhaps, CO's constitute one group, while SO, EO, and AO constitute

another. The relative position of the IO's is unclear.

Taken collectively, however, the data in Tables 7 and 8 make it possible to categorize the cognitive frames of the six teaching orientations in terms of observable linguistic phenomena. From such linguistic data a continuum to chart the relative cognitive frames of reference of the orientations suggests itself. Figure 4 presents this continuum.

Figure 4

A CONTINUUM OF THE COGNITIVE FRAMES OF REFERENCE, BY SIX TEACHING ORIENTATIONS

RO (CO, by inference)	IO	SO	AO	EO
Nominality-Formality				Verbality-Informality

The Social Frame of Reference

It is something of an oversimplification to maintain that pronouns are the integrating elements between language structure and the social group. But they are. Pronouns hold a dual position in language. The pronoun is an accessible pivot between the grammatical structure and the social group. To focus on pronoun usage is to provide the kind of data that develops into a pattern. The pattern is linguistic, and it is also one that authentically reflects the pattern of the social group (see Peters, 1971, 115-121).

The initial data analysis of personal pronoun usage from the six orientations produces a multitude of significant differences, in terms of f-ratios, at levels of confidence between .05 and .01. These data are classified in the following manner: the number of first and third persons,

singular and plural; the percentage of first person plural (i.e., there were no significant differences in the percentage of first person singular usage); the percentage of third person singular and plural; the number and percentage of second person (i.e., in English, no pronominal form distinguishes between singular and plural). Table 9 presents these data.

(insert Table 9 about here)

The data in Table 9 produce only gross trends. Of the fourteen possible combinations of teaching orientations for comparative purposes, twelve demonstrate significant differences in pronominal variables. Most of these differences lie in one variable, the number of third person, plural. Beyond this statement, more significant differences occur between RO's and the other orientations in first-person usage, while more significant differences among the other orientations lie in the second and third person variables.

It is difficult to assess such gross trends, mostly because one needs to specify to what the pronominal variables refer. In other words, because pronouns substitute for other entities, which incidentally can be pointed at, it is important to indicate just what these other entities are. Therefore, it is more appropriate to summarize the significant differences in matrix form.

Such a matrix lists the three basic categories of personal pronouns along the horizontal axis. First-person usage indicates an I-we relationship that is primarily concerned with the self. Second-person usage signifies an I-thou relationship that is concerned with self and others. Third-person usage designates a he-it entity that stands apart from the self and from those others who have a more or less direct relationship with the self. Along the horizontal axis of the matrix there are categories of usage in terms of "most" and "least." The grid thus formed gives rise to cells in

Table 9

SIGNIFICANT DIFFERENCES IN THE USAGE OF PERSONAL PRONOUNS BY SIX TEACHING ORIENTATIONS: F-RATIOS

Pronoun Variable	Orientations													
	RO-IO	RO-SO	RO-EO	RO-AO	IO-SO	IO-CO	IO-EO	SO-EO	SO-AO	CO-EO	CO-AO	EO-AO
Number of 1st person singular												
Percentage 1st person plural	.05 IO						.01 IO					
Number of 3rd person singular		.05 RO	.05 RO									
Percentage 3rd person singular		.05 RO										
Number of 3rd person plural	.01 IO		.01 EO	**.01** AO	.01 IO	.01 IO		.01 EO	.01 AO	.01 EO	**.01** AO	
Percentage 3rd person plural	.01 IO		.01 EO	.01 AO				.05 EO				
Number of 2nd person			**.01** EO				.05 EO	.05 EO				
Percentage 2nd person			.01 EO									.05 AO

*The symbol beneath the significant f-ratio indicates that orientation whose usage of the variable is greater.

which the six teaching orientations are tallied according to what orientations are use the most and least numbers and percantages of personal pronouns. These data are indicated in Figure 5.

Figure 5

A MATRIX OF PERSONAL PRONOUNS USED BY SIX TEACHING ORIENTATIONS

	Most	Least
First Person (self)	SO EO AO	RO CO
Second Person (self and others)	EO AO	RO CO IO SO
Third Person (outside entities)	RO CO (IO, Mid-range)	AO (EO, SO, Mid-range)

The information in Figure 5 produce a pattern that suggests the social frames of reference for the six teaching orientations. The RO's and the CO's use fewer first person pronouns than faculty in SO, EO, or AO. As well, the RO's and the CO's use fewer second-person pronouns than either the EO's or the AO's. However, the RO's and CO's use more third person pronouns.

In light of these data, it might be suggested that the RO's and CO's are more conscious of entities in the outside world than they are of themselves or themselves in direct relationship to others. By contrast, EO's and AO's, who use more first- and second-person pronouns than the other groups, also tend to use fewer third-person pronouns. Consequently, these faculty are more conscious of people-to-people (including the self) than are the other orientations. The EO's and the AO's are also less conscious of outside entities, evidently preferring to construe their social world in terms of people rather than other entities.

In this regard, then, it is not too much of an inductive leap to suggest that RO's and CO's construe their social worlds in terms of things, while EO's and AO's are people-oriented people. Such a thing-people dichotomy represents an exaggeration of extremes; nonetheless, it does seem to make clear the relative position of the several faculty groupings.

Between these extremes, however, are two faculty teaching orientations on whom the above data shed little light. These are the IO's and the SO's, and, at this point, it is possible to suggest two modes of thought. On the one hand, these groups might be mid-range on a thing-people continuum. On the other hand, they might have a completely separate viewpoint that stands apart from either things or people. Just what this separate point of view might be is unclear from these data alone, and conjecture about what that point of view might be is just that -- conjecture.*

Nevertheless, pursuing the idea that the respondents' pronouns substitute for entities allows for transposing these pronouns into whatever substantives in the respondents' environment those pronouns stood for. Such an analysis reveals that third-person plural usage data produce important results.

In other words, the <u>they's</u> and <u>them's</u> are substitutes for entities that exist in the university's social community. Specifically, the

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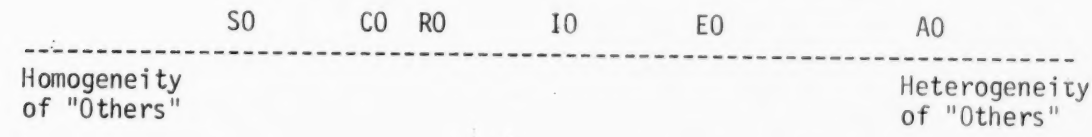
*Previous sociolinguistic research has found a thing-people dichotomy for faculty at institutions similar to the one used in this research. The earlier research, which classified faculty into Natural Sciences, Social Sciences, and Humanities, demonstrated that Natural Sciences faculty held to a thing orientation which contrasted with Humanities faculty's people orientation. However, it was also found that faculty in the Social Sciences did not fall into the mid-range on a thing-people continuum. Instead, faculty in the Social Sciences have a "process" orientation that, as the term suggests, concerns not what is done (thing) and not who does it to whom (people), but how it is done (process). See Peters, 1969.

referential meanings for the they's and them's are grouped into two categories -- a homogeneity of referential meanings and a heterogeneity of referential meanings (see Figure 6).

Figure 6

A CONTINUUM OF THE REFERENTIAL MEANINGS FOR THIRD PERSON PLURAL PRONOUNS BY SIX TEACHING ORIENTATIONS



The positions of the six teaching orientations on the continuum in Figure 6 suggest that there are differences among the orientations in terms of how they related to other people in their immediate environment. For example, the SO's use of third-person plural refers to colleagues across and within departmental lines, and so the SO's exhibit a relative homogeneity of usage-meaning. By contrast, when the AO's use the third-person plural, they refer to a variety of "others": for instance, they mean colleagues in the university and across the country, students, administrators, and so on. In effect, the AO's exhibit a marked heterogeneity of usage meaning. Between these two poles the other four teaching orientations fall, RO's and CO's tending toward homogeneity, EO's tending toward heterogeneity, and IO's tending toward the middle point on the line.

In and of itself, this analysis seems hardly to have contributed a penetrating insight until one remembers that pronouns are the pivot between language structure and the social group. And so, since social groups exist in an environment, it is reasonable to look for a relationship between pronominal usage and the campus scene. There is such relationship. There are congruent patterns in the two analyses, and there is closure.

One of the first analyses of the questionnaire (see Cluster 1: The Campus Scene, pp. 13-14) demonstrated significant differences between the SO's and the AO's. The SO's, like the rest of the sample, perceived that faculty interaction was a favorable circumstance on the campus. AO's, however, perceived not faculty interaction, but faculty aloofness, and this circumstance, relatively speaking, they regarded as unfavorable. Thus, AO's see faculty aloofness and SO's do not.

A similar pattern emerges in the concept of the pronoun. A particular instance of pronominal usage -- in this case it is third-person plural -- demonstrates that while the AO's they's and them's are discrete, disparate personages whose diversity lends a feeling of alienation from the campus scene, the SO's they's and them's are more or less unified, and whatever diversity may exist, it does not lend itself to a feeling of alienation. Thus are pronouns an indicator of the campus scene, and thus are they an indicator of a teaching orientation's social frame of reference.

Summary

In conclusion, the several structural (i.e., linguistic) analyses distribute the six teaching orientations along several continua. For the most part, the continua are congruent. In almost all instances the RO's and the CO's are distributed toward the one pole, while EO's, AO's and SO's are distributed toward the other. The IO's, despite a paucity of data, tend to be distributed in the middle of the continua, but the tendency here is for the IO's to gravitate toward the RO's and the CO's.

Consequently, it becomes evident that the cognitive and social frames of reference of the six teaching orientations are congruent, if not exactly parallel. RO's and CO's are nominal, formal, and impersonal in the sense that they tend to be thing-oriented. EO's, SO's, and AO's are verbal, informal and personal in the sense that they are people-oriented. IO's tend toward nominality, formality, and a thing orientation, but to a lesser degree than their colleagues in the RO's and the CO's.

Finally, an analysis of the third-person plural data produced a pattern analogous to a pattern found in the campus environment. As such, this analogy might well give credibility to a methodology in higher education that utilizes pronominal analysis as a means to describe faculty perceptions of their working environment.

CHAPTER V

THE CORROBORATING INSTRUMENT

Any choice of a substantiating instrument must satisfy at least two requirements. Not only must it be similar enough to the primary data treatment to lend consistency to the whole design, but also it must be different enough to allow of the collection and treatment of substantial and separate data on its own. The choice of such a corroborating instrument came as a result of prior study in applied psycholinguistic research. The instrument itself is called the Semantic Differential (see Appendix C).

More particularly, the semantic differential collects data in terms of the participants' responses to three general situations. The first situation (Question 1) concerns student-faculty interaction, and the results are related to faculty attitudes toward instructional techniques and to general social awareness. The second situation (Question 2) concerns the use of behavioral objectives and the student rating of teaching effectiveness; results here speak to instructional techniques in a more general way, as well as to the participants' proclivity for current curriculum trends. The last situation (question 3) concerns the idea of change, and the results relate to the respondents' relative flexibility, or lack thereof, in their attitudes toward curriculum and instruction.

Each of these three situations produce data from the six teaching orientations that are categorized in three factors: (1) activity, which is designated by such bipolar adjectives as "active-passive"; (2) potency, which is indicated by such bipolar adjectives as "weak-strong"; and (3) evaluation, which is designated by such bipolar adjectives as "desirable-

undesirable."

Furthermore, a respondent's position (i.e., his attitude) between the bipolar adjectives, for each situation and each factor, is fixed on a numerical scale from 1 to 7 -- 1 indicating the negative, 7 the positive, and 4 the neutral. These data, then, were submitted to a one-way analysis of variance to determine the differences among the six teaching orientations in terms of the three situations and the three factors.

The first results of the analysis of the semantic differential indicate that there are significant differences among the six teaching orientations. These gross data are arranged in tabular form, the factors along the horizontal axis, and the situations along the vertical axis. Table 10 presents these data.

Table 10

THE SEMANTIC DIFFERENTIAL:
BASIC SIGNIFICANT DIFFERENCES AMONG SIX TEACHING ORIENTATIONS

	Factor		
Situation	Activity	Potency	Evaluation
Question 1	n.s.	.01	.01
Question 2	.05	.01	.01
Question 3	n.s.	.01	n.s.

Data in Table 10 demonstrate that in six of the nine areas represented by the table significant differences occur. Specifically, there are significant differences at the .01 level among the six teaching orientations in the potency factor for all three situations. As well significant differences occur at the .01 level in the evaluation factor for situations 1 and 2. For one situation (Question 2), the activity factor produced a

significant difference at the .05 level of confidence. By examining these six areas of difference in more specific terms, more information about faculty attitudes toward curriculum and instruction can be made known.

Situation 1: Student-Faculty Interaction

The situation regarding student-faculty interaction is intended to produce information concerning social relationships and teaching techniques. For instance, if faculty interact with students in an informal manner by indicating a positive attitude, then they are likely to be more aware of students as persons and so are not likely to utilize the more traditional modes of instruction.

Data from the semantic differential on Situation 1 yield significant differences at the .01 level in two of the three factors. These data are arranged in terms of the homogeneous subgroupings of teaching orientations within those factors where significant differences occur. Table 11 presents these data.

Table 11

SITUATION 1: SCALED RESPONSES TO THREE FACTORS BY HOMOGENEOUS SUBGROUPINGS OF TEACHING ORIENTATIONS

	Scale		
	1. . . 4----------7		
	Negative...Neutral----------Positive		
Factor			
	IO (4.49)*	AO (4.79)	
	AO (4.79)	RO (4.97)	CO (5.54)
		SO (5.01)	
Potency		EO (5.13)	
P = .01			
	IO (4.48)	AO (4.93)	CO (5.75)
	AO (4.93)	SO (4.95)	
	SO (4.95)	RO (4.96)	
Evaluation	RO (4.96)	EO (5.08)	
P = .01			
Activity n.s. (Mean scores range from 5.02, IO, to 5.53, CO)			

*The numerals in parantheses indicate the mean score of each teaching orientation for that factor.

The data in Table 11 indicate that, for the most part, the six orientations regard student-faculty interaction in positive terms, but that positive regard is not particularly high since it ranges from a mean score of 4.49 (i.e., close to neutral) to a mean score of 5.75 on a scale from 4 to 7. However, the data also indicate that there are homogeneous subgroupings in the potency and evaluation factors, and in these factors significant differences occur. For each factor there are some overlaps (e.g., the AO's are included in both homogeneous subgroups in the potency factor), but one teaching orientation, the CO's, does not combine with any of the others to form a subgroup.

Inferences from these data, then, are relatively clear. CO's are appreciably different from the other orientations. Not only do they look upon student-faculty interaction as positive, but also they regard that position as desirable and strong to a greater extent than the other orientations. By contrast, the IO's approach the neutral position in these terms. Consequently, the CO's seem more concerned about student-faculty interaction than the IO's.

Situation 2: Using Behavioral Objectives and Student Rating of Teaching

The situation that asks faculty to respond to the use of behavioral objectives and student rating of teaching effectiveness also produces significant differences. The information thus derived speaks to the faculty's general awareness of and attitudes toward current trends in curriculum and instruction. For instance, if faculty are favorably disposed toward behavioral objectives and the student rating of teaching, then they are likely to be more innovative (or less traditional) and more flexible (or less structured) in their planning of learning activities.

Data from the semantic differential on Situation 2 yield significant differences between the .05 and .01 levels of confidence for all three factors. These data are also arranged in terms of homogeneous subgroupings of the six teaching orientations. Table 12 presents these data.

Table 12

SITUATION 2: SCALED RESPONSES TO THREE FACTORS BY HOMOGENEOUS SUBGROUPINGS OF SIX TEACHING ORIENTATIONS

Scale

1. 4----------7
Negative...Neutral----------Positive

Factor			
Potency P = .01	CO (4.86)* IO (4.91) EO (5.03) RO (5.19) AO (5.27)	AO (5.27) SO (5.64)	
Evaluation P = .01	CO (4.85) IO (5.12) RO (5.17) EO (5.31)	IO (5.12) RO (5.17) EO (5.31) AO (5.46)	AO (5.46) SO (5.82)
Activity P = .05	IO (4.79) CO (4.91) EO (5.05)	CO (4.91) EO (5.05) AO (5.20) RO (5.29)	EO (5.05) AO (5.20) RO (5.29) SO (5.35)

*The numerals in parentheses indicate the mean score of each teaching orientation for that factor.

The data in Table 12 indicate that, for the most part, faculty have a positive attitude toward using behavioral objectives and student ratings of teaching, but, again, that regard is not likely to be especially high since, overall, the mean scores range from 4.79 to 5.82. Nevertheless, there are several sets of homogeneous subgroupings that include all six orientations and considerable overlap. In this situation, however, it

seems clear that CO's, IO's, and EO's tend more toward the neutral position, while SO's and AO's are likely to be more positvely disposed. In other words, the AO's and SO's tend to be more positvely oriented toward current trends in curriculum and instruction than the CO's, IO's and EO's and these relatively positive positions are likely to be regarded as active, strong, and desirable.

Situation 3: The Concept of Change

The situation that reveals faculty attitudes toward change also indicates their flexibility and their attitudes toward innovation. In general, the more positive the data, the more receptive that faculty are toward change.

Data from the semantic differential on Situation 3 produces only one set of significant differences, these at the .01 level, in the potency factor. Table 13 presents these data.

Table 13

SITUATION 3: SCALED RESPONSES TO THREE FACTORS BY HOMOGENEOUS SUBGROUPINGS OF SIX TEACHING ORIENTATIONS

	Scale: 1 . . . . .4----------7 Negative ... Neutral ----------Positive	
Factor		
Potency P = .01	RO (4.97)* IO (5.11)	EO (5.51) AO (5.53) CO (5.66) SO (5.66)
Evaluation	ns (mean scores range from 4.96 (RO) to 5.43 (SO))	
Activity	ns (mean scores range from 5.08 (IO) to 5.58 (CO))	

*The numerals in parentheses indicate the mean scores of teaching orientation for that factor.

The data in Table 13 demonstrates that there are two discrete homogeneous subgroupings in the potency factor with no overlap. RO's and IO's are significantly different from the other four teaching orientations, especially the CO's and the SO's. Although the data generally suggest a positive regard for change among all orientations, the RO's and the IO's are more likely to approach the neutral position than the other orientations. That is, the RO's and the IO's tend to be less flexible (or more structured) than the other orientations, and this attitude, according to the data, reflects a position of strength.

Summary

Taken collectively, data from the semantic differential make it possible to position the six teaching orientations on a general continuum that ranges, on the one hand, from the more traditional, more structured, more formal, and more impersonal to the more innovative, less structured, more informal, and more personal, on the other hand. For the sake of simplicity in presentation, one might call the former end of the continuum "structured" and the latter end "non-structured," and so chart the general positions of the six teaching orientations along the continuum line (see Figure 7).

Figure 7

A COLLECTIVE REPRESENTATION OF RESULTS
FROM THE SEMANTIC DIFFERENTIAL

The above continuum, representing the collective data drawn from the results of the semantic differential, tends to substantiate previous find-

ings, if only in a very general way. Comparing Figure 7 with Figures 2 through 5 suggests that findings from the questionnaire, the taped-interview sessions, and the sociolinguistic analyses are valid and reliable to some extent. (Figures 6 and 7 do not reflect comparable data.)

For example, Figure 2 (p.19) coincides with Figure 7 in every way. Faculty attitudes toward, and definitions of, curriculum produce a pattern parallel with that of the semantic differential. Figure 3 (p. 21) is congruent with, but not parallel to, Figure 7; this juxtaposition reveals some internal variations among the RO's, CO's and EO's, although the positions of those orientations toward either pole remains constant.

Figure 4 (p. 28) is congruent with Figure 7 only in the grossest of ways, especially with regard to the EO's and the CO's. One might point out, however, that the position of the CO's on Figure 4 was by inference only, and so it might well be that Figure 7 is more nearly reliable than Figure 4.

The use of personal pronouns in Figure 5 (p. 31) is congruent with Figure 7 in the sense that IO's and RO's are more likely to be impersonal (or "thing-oriented") than are AO's and SO's who are relatively "people-oriented." But again, the position of the CO's in Figure 5 remains in doubt, although the overall patterns of the two figures tend to be congruent.

In all, with some exceptions, most notably in the CO's, the data from the corroborating instrument reflects the data from the primary sets of analyses. That there are significant differences among the six teaching orientations in terms of their attitudes toward curriculum and the use of instructional techniques is generally substantiated by similar kinds of significant differences emanating from responses to the semantic differ-

ential. Consequently, to say that faculty attitudes toward curriculum and instruction are different is a gross understatement. How faculty regard the concept of curriculum relates to their teaching orientations. Similarly, their regard for instructional planning in terms of the teaching techniques they employ also relates to their teaching orientation. In short, faculty attitudes toward curriculum and instruction differ in terms of the subject matter they teach.

SECTION THREE: IMPACT

CHAPTER VI

CONCLUSIONS

That a faculty member's teaching orientation has an impact on his attitudes toward curriculum and the use of instructional techniques is something of an understatement, but it is a fundamental assertion. For one thing, it points up the danger of talking about academic men as if they were all the same; the danger is persistent in that it can lead to serious errors. Assuming that professors have different attitudes and then describing what these differences are have constituted the main thrust of the present inquiry. Such an investigation proceeds as a set of hypotheses which are either substantiated or refuted by the analysis of data collected by doing research. In this study there are three null hypotheses, and all three are refuted by the analyses.

HYPOTHESIS ONE: There are no significant differences in attitudes toward the concept of curriculum among the six teaching orientations.

Two specific analyses fail to confirm the hypothesis. One occurs in the content analysis of the questionnaire; the other, in a content analysis of the taped-interview sessions. The findings of both analyses demonstrate not only that there are significant differences among the teaching orientations, but also that these differences are related to teaching orientation.

However, these analyses do not produce discrete attitudinal differences for each of the teaching orientations. Instead, some orientations come together to form a larger category so that, in all, there are four such divisions. In other words, given a continuum between a traditional or structured conception of curriculum and that which is non-traditional or non-structured,

there are four main groups of faculty. IO's and RO's become a unit or a group whose view of curriculum is structured, while SO's and AO's, to some extent, form another unit whose view is non-structured. The positions of the EO's and the CO's on the continuum, however, tends to shift independently of one another, and so each of these teaching orientations becomes a separate unit or group. In conclusion, then, there are four categories of faculty attitudes toward curriculum, and each category is different from the others.

Hypothesis One is not confirmed.

HYPOTHESIS TWO: There are no significant differences in attitudes toward the use of instructional techniques among the six teaching orientations.

Although the analysis of the questionnaire failed to produce significant differences among the teaching orientations in terms of the general teaching role, the more detailed content analysis of the responses to specific questions during the taped-interview sessions did produce significant differences. Analysis of these interview data demonstrates that the use of instructional techniques relates to teaching orientation.

Again, the analysis does not yield discrete differences for each of the six teaching orientations. Some orientations come together to form larger categories, and there are four of these units, albeit not the same four groups as indicated previously. Thus, given a continuum between formal and informal techniques, IO's and EO's are likely to utilize the formal lecture-discussion, while SO's employ a wide variety of techniques, and so approach the informal pole. Between these extremes are the CO's and the RO's who combine to form a mid-range unit, and the AO's who

approach both poles and so have no one position. Therefore, there are four categories of faculty attitudes toward the use of instructional techniques.

Hypothesis Two is not confirmed.

HYPOTHESIS THREE: There are no significant differences in the structure of faculty speech patterns among the six teaching orientations.

Two general linguistic analyses demonstrate that there are significant differences among the orientations. The first general analysis, composed of two lesser analyses in nominality-verbality and formality-informality, indicated four categories of differences. On a continuum between nominality-formality and verbality-informality, the RO's and the CO's fall toward the former pole, and the EO's approach the latter. Between these extremes fall the other two groups. AO's and SO's are grouped together into one category and tend toward the verbality-informality pole, while IO's approach nominality-informality. These differences suggest that there are four cognitive approaches for how faculty members construe their working environment.

In turn, the second general linguistic analysis, composed of lesser pronominal analyses, also suggest that there are four social approaches for how faculty members construe the people (e.g., colleagues and students) who make up their working relationships. On the one hand, the RO's and the CO's tend to regard their interpersonal relationships in terms of outside or external entities; oversimplified, it is an "I-thing" relationship that is best described as impersonal, although not necessarily cold or aloof. On the other hand, AO's tend to regard their interpersonal relationships in terms of internal entities; oversimplified, it is a "we"

relationship that is best described as personal. Between these two poles fall the other groups. IO's constitute one group, and their interpersonal relationships approach the thing-orientation of the RO's and CO's, while the SO's and the EO's, who are also mid-range, tend toward a people-orientation.

Hypothesis Three is not confirmed.

Summary

In conclusion, not only do faculty demonstrate patterns of significant differences in their attitudes toward curriculum and instruction, but also they have differences in their language patterns. Moreover, all these patterns tend to be congruent with one another, albeit the several patterns are not completely interchangeable.

The results of each individual analysis demonstrated that faculty attitudes toward curriculum and instruction can be classified into four groups. Unfortunately, however, when the groups are superimposed one upon the other, the parameters are not always co-terminous. Still, there are obvious analogies.

Three teaching orientations generally fall into the structured, formal, nominal, and impersonal categories -- engineering-agriculture (RO), accounting-economics (CO), and chemistry (IO). However, as one moves toward the non-structured, informal, verbal, and personal end of the overall paradigm, the lines of demarcation become blurred and indistinct. In one sense, though, such a lack of clarity is predictable; that which is non-structured and informal does not lend itself to fine distinctions.

In other words, the findings indicate that those faculty who tend to hold traditional and/or structured attitudes toward curriculum, who tend to use formal instructional techniques, who are nominal and formal and

thereby tend to be relatively conforming, and who tend to relate social interactions to outside entities -- all these are usually the same groups. These groups are the Natural Sciences and some of the Social Sciences (i.e., accounting and economics), and the findings are quite clear in this regard.

By relative contrast, the findings indicate, although not quite so clearly, that those faculty whose views of curriculum are non-traditional and/or non-structured, whose instructional techniques tend more toward interaction, whose cognitive frame tends toward verbality, relative non-conformity, and informality, and whose social awareness tends toward the self and other persons -- all these are usually the same groups (even with some exceptions). These groups tend to be faculty in history-government and business management (EO) and those in education-psychology (SO) and English-speech (AO). That is, these groups tend to include most faculty in Humanities and the rest of the faculty in the Social Sciences.

CHAPTER VII

DISCUSSION

Although any discussion that treats the implications of findings in the present inquiry is fraught with pitfalls, it is nonetheless important to view these findings in relation to higher education as a whole. As such, the discussion must attend to at least two topics. The first concerns the relationship between the results of the investigation and the theory of personality types on which it is based. In this regard, the intent is to ascertain whether or not Holland's theory of personality types is applicable to the professoriate. Next, it is perhaps even more important to view the findings in terms of administrative personnel practices with regard to the professoriate and to suggest ways in which those practices might have an impact on student-faculty relationships. The following discussions, then, consider these two general topics.

The Theory of Personality Types

According to the research design of this investigation (pp.3 -4), we assumed not only that faculty could be divided into six personality types, which we called teaching orientations, but that each of these six groups was discrete and could be described separately. However, in every set of findings, these six groups simply did not hold fast. Instead of six, there were almost always four groups, and despite the fact that these four groups are not interchangeable, there is enough congruence among them to suggest that Holland's theory of personality types is not universally applicable to the professoriate. Quite simply, Holland has allocated too many types to the academic profession.

From the outset, it is quite clear that the RO's and the IO's are more alike than different. That these two teaching orientations combine to make up part of the Natural Sciences (i.e., the physical and biological sciences) is obvious. Consequently, those schema which include this category (see pp. 3-4) are acceptable and on-target.

It is also quite clear that the AO's and the SO's are more alike than different. These two teaching orientations combine to make up another unit that is quite the opposite of the Natural Sciences. However, it is not clear whether we are talking about the Humanities or the Social Sciences in the usual classification schema, and so, for convenience, these teaching orientations can be labeled the Social Humanities. This group stands in opposition to that of the Natural Sciences.

A third group is the CO. Holland's categorization of this orientation as a discrete unit holds, but his description of the group is somewhat less than satisfactory, if only because they are somewhat less conforming than the Natural Sciences group -- a finding that is bourne out by the analysis of the semantic differential (p. 36 ff ~~10~~). In short, the CO's are mislabeled; they are more appropriately described as "operational," and, in essence, the Operational Orientation is both similar to and different from the Natural Sciences and the Social Humanities. Like the Natural Sciences, they tend toward conformity and formality, but, like the Social Humanities, they are sometimes non-traditional and non-structured.

The last group is the faculty in history-government and business management (EO's), and in many ways this group is the most elusive of all. Holland's categorization of this group as a discrete unit is acceptable;

moreover, his description is fairly accurate (see p.10). EO's are formal, but often creative. They are traditional and structured, but quite keen on interpersonal relationships. Holland has described them as preferring ambiguity, and in light of the findings that description is most apt. EO's share both commonalities with and distinctions from the Natural Sciences and the Social Humanities. Faculty in history-government and business management are also different from (rather than similar to) the Operational Orientation. In short, the Enterprising Orientation exhibits a provocative set of contrasts.

In all, it is perhaps wise to remember once more that as we move from the clean, sharp distinctions of the traditional and the structured to the blurred, fuzzy outlines of the non-traditional and the non-structured, so we move from that which is overt to that which is less apparent. Just as individuals refuse to be confined by precise labels, so do groups of individuals resist all but the most general of descriptions. Such is the nature of human beings; they are uniquely individuals -- even in groups.

Yet the human mind is such that it needs to classify, to pin on labels, because such practice helps us to get our bearings. In higher education we need the bearings in order to chart a direction. Thus, the bearings tell us that the professoriate is comprised of four distinct groups. In terms of the design of this investigation we can refer to them by numerals: Group 1 is the Natural Sciences (RO and IO); Group 2 is the Social Humanities (SO and AO); Group 3 is the "Operational" (CO); and Group 4 is the Enterprising orientation. Of these, only Groups 1 and 2 are contrastive and relatively simple to describe; the other two groups, especially the EO's are like quicksilver, and they cannot readily be confined in a neat mold.

Nevertheless, to describe and interpret each of these four groups, however cursorily, is to provide a reference base for further research into faculty behavior. In general terms, then, are they described.

The Natural Sciences and the Social Humanities are obviously contrastive. Each represents one pole on a thing-people continuum. The Natural Sciences have a thing-orientation. Such a frame of reference explains their penchant for that which is structured, their relative indifference to interpersonal relationships, and their ability to solve problems in task-oriented situations. The Natural Sciences have the knack of transposing abstract concepts into concrete reality, a capacity that speaks well for them.

On the other hand, the Social Humanities are people-oriented people. Their frame of reference, which is different from the Natural Sciences, explains their ability to function in non-structured situations where they are called on to demonstrate their considerable skills in interpersonal relationships. Unlike the Natural Sciences, who solve problems in task-oriented situations, the Social Humanities solve problems by manipulating (in the positive connotation of the word) people. Social Humanities have the capacity to turn abstract concepts into individual, creative, or social actions, and this is their forte.

The third group of university faculty is the Operational Orientation. It is almost too much of a temptation to resist placing them in a mid-range position on the thing-people continuum simply because they are both structured and non-structured, social and asocial, and conforming and non-conforming. Instead, however, their orientation is operational; it is concerned with process. Such a frame of reference explains their

flexibility. In essence, this group of faculty teaching economics, accounting, and perhaps finance and marketing are concerned with the process of operations. They function out of a frame of reference that asks, "What specific problem-solving method will work for most people in this particular situation?"

The last group of faculty coincides with Holland's Enterprising Orientation, and these professors of history, government, and business management are admittedly difficult to interpret. First of all, the EO's have many traits that also characterize the other three groups. They are creative, but formal; skillful at interpersonal relationships, but not always utilizing this skill. Labeling such a group of people "enterprising" hardly does justice to their capacities, but it is a neutral and descriptive label nonetheless.

However, beneath this facade is a collective personality that lends itself to literary allusion. Professors of history, government, and business management are at once Mercutio and Don Quixote. Like Quixote, they are visionary, but unlike Quixote, they are practical. Like Mercutio, they command the language eloquently, but, unlike Mercutio, they are not impulsive. These professors have an exquisite sense of balance; their capacity to project from the present into the future matches their ability to exert an influence on present and future structures. Such a frame of reference explains, at least in part, their associations with decision-making offices.

The Campus Environment

If the above discussion has provided a set of bearings, then these bearings can help with charting directions. However, what directions higher education moves in depends on those directions that individual

institutions move in, and almost always we need to take into account the notion of campus environment. In other words, the idea of campus climate is interrelated with the bearings and the directions of institutions.

The idea that a working environment influences both the findings within that environment and the goals an institution seeks to attain is hardly a novel one, but this sort of statement is underscored by one of the first findings in this research study. The faculty within this sample have significantly different views of the "Campus Scene" (see pp. -), and the differences depend on their teaching orientations. Thus, it is possible to conclude that faculty attitudes toward their working environment, toward the concept of curriculum, and toward the use of instructional techniques -- all of which are significantly different depending on a faculty member's teaching orientation -- are interrelated. Furthermore, the goals of a given institution of higher learning must, then, take these factors into account when one plots a direction for attaining the goals.

Specifically, what I am saying is that in order to attain an institution's goals, the administration must consider those areas of concern that influence the goals. These areas are part of the campus climate, and they concern administrative personnel practices and student-faculty relationships.

Administrative Personnel Practices

One of the basic purposes of education in a democratic society is to provide an environment where one can learn to make discriminating judgments. The emphasis lies on the word "discriminating," and in this sense we are talking about differences, not likenesses. We are exhorted to treat student as individuals, to individualize learning; we are also exhorted

to be efficient and effective about it, and to provide "equality of opportunity" and/or "equality of treatment." But equality is a word that implies similarity, and education connotes discriminating judgment. Similarities are not differences.

If, however, education concerns discrimination (but not in the perjorative sense), then one thing is clear. People in education should be treated not similarly, but differently. Just as different students learn different things in different ways at different rates and under different circumstances, so do different faculty teach different things (or perhaps the same thing) in different ways under different circumstances (or perhaps the same circumstances). Thus, those administrative personnel practices which fail to take into account faculty differences such as those discussed in this study are off-base.

More specifically, those administrative personnel practices which tend toward a uniformity of treatment under the guise of "equal treatment" deny a basic purpose of education -- making discriminating judgments. Such practices treat all professors as if they were the same, and such treatment is unwise. Professors are different; they should not be treated equally the same. As well, where the treatments are discriminating, they should be clear, immediately comprehensible, and consistent with an institution's stated goals.

I believe that the word that causes much of the confusion here is the word "equality." Equality is not appropriate to education unless we tag on a extra phrase -- as in "equality of opportunity" or whatever. The word that is appropriate to education is "equitability"; it needs no tags attached, but it does connote discriminating judgments. To treat faculty equitably is to treat them as individuals. To treat faculty equitably is

not to treat them equally.

The implications of equitability, instead of equality, as a concept governing some administrative personnel practices are considerably more than just a series of semantic nuances. They are far-reaching implications; they affect directions and goals. Some of these implications might include policy statements and/or practices in faculty committee structure, promotion and tenure, hiring new faculty with special kinds of expertise in accord with an institution's professed goals, and the planning of new facilities.

For example, the faculty curriculum committee, theoretically one of the most importance governance inputs, might be more equitably distributed in terms of the faculty's attitudes toward what curriculum is. Instead of structuring the committee in terms of campus politics or an equal representation from departments, schools, or whatever, it might be more appropriate to allocate membership from those teaching areas which are known to have divergent viewpoints. In such a way might the divergency be aired and thrashed out according to specified institutional goals. It takes time for these sorts of considerations, but it is time well taken in the long run.

Such time might well point out discrepancies in other institutional administrative policies as well. For instance, an institution who professes to emphasize excellence in undergraduate teaching and who pays its teaching assistants significantly less than its research assistants practices discrimination in the perjorative sense of the word. Equitable faculty distribution in curricular matters can call attention to and help to remedy such inequities. Similarly, an institution having faculty with expertise in evaluating and improving undergraduate teaching effectiveness in con-

junction with a professed institutional goal for excellence in undergraduate teaching negates that goal by failing to support the experts whom it has hired.

In short, administrative personnel practices should elicit faculty voice in academic governance. Administrators cannot make decisions, especially curricular decisions, in a vacuum. They need the faculty input in these matters. And the findings of the present study have delineated the scope of such input. To deny these findings by whatever ploy is to deny the importance of the faculty for academic governance. Quite simply, such practice is unwise.

However, where the faculty's voices have an impact on curricular decisions, they also influence an institution's growth, either quantitative or qualitative. It has long been a dictum that the curriculum, however it may be defined, is the enactment of an institution's goals -- immediate or long range. Just as it is impossible to attempt long-range planning in an ad hoc manner -- that is, an institution must plan for change in a changing society -- so it is impossible to make these plans without faculty input.

For example, if an institution needs to refurbish its classroom buildings or build new ones, then the specifications of those plans must concern the faculty who will teach in the classrooms. As the findings in this investigation demonstrate, not all specifications can or should include classrooms whose arrangements coincide with a formal teaching technique as lecture or seminar. Those faculty in speech, English, education, psychology, and, to some extent, accounting, business administration, and economics neither need nor want such formal arrangements. Architects, through administrative personnel practices, need to be made aware of such differences.

Again, faculty input in curricular-instructional matters is crucial. An institution cannot attain its goals without the faculty.

Student-Faculty Relationships

Just as faculty are different, so are students. Some students take some subjects because of distribution requirements. Others are taking a subject because it is their "major." Often these some's and others are in the same class, however. Surely, registration procedures should take such differences into account. It is possible to "mix" students whose personality characteristics are structured (e.g., as determined by the Omnibus Personality Inventory) with those whose characteristics are non-structured, but perhaps the concept of "mix" needs a bit more than just the random catch-as-catch-can of registration. When faculty specify the nature of the courses they teach and when they are given time to prepare these designs for teaching in either a formal or an informal manner, students might be better able to select courses, with appropriate advisement and counseling.

In addition, because faculty attitudes toward social interaction with student differ, the arrangements for such contacts should take these differences into consideration. Faculty office accommodations and faculty-student lounges for advice, counsel, and even conversation might be more appropriately planned. For example, it is not always convenient or desirable for a faculty member to talk with a student in the office, in the classroom, or in a more centrally located student center; a series of semi-formal lounges might be more equitable -- especially for those faculty who are people-oriented.

Similarly, technological sophistication in communications systems make it possible for faculty advisors and student personnel counselors to have immediate access to course designs prepared by the faculty. Computerized

retrieval systems or a series of clearinghouse offices, depending on budgetary constraints and institutional goals, can make advisement far more effective than it is. In those teaching orientations where there is a non-structured attitude toward curriculum (i.e., where curriculum is construed to occur both in and out of the classroom), there is a genuine need to provide for equitable interpersonal relationships between faculty and students.

In all, college teaching is a complex affair; it can no longer be left to ad hoc arrangements for faculty or for students. To dismiss the complexity as an unknown or an unknowable commodity is to say that because we know little, we know nothing. Not true. We have learned some of the particulars.

We have learned a great deal about the college student. Much in the literature of higher education concerns research and commentary about students. No less abounding is the research conducted into college and university faculty, of which this investigation is a small part. Refusing to recognize these pieces in the literature (or being unaware of them) is folly of the worst sort. We have learned something about the particulars of student-faculty relationships. Not all, perhaps, but a significant "some." To deny a piece of what might be a truth is to deny one role of the university. It is unthinkable to say that because we haven't learned all, we have learned none.

One of the values of knowledge, even some knowledge, lies in its predictability. Most knowledge is composed of patterns. Once you see a part of the pattern, you can predict the whole. If you cannot apprehend the whole, that part that you do apprehend leads you to make inferences and/or hypotheses about the whole. If these hypotheses are untrue, you'll

find out. After all, truth does out. The function of the university is to search after and disseminate the truth as it is known at that time and in that place.

In the meantime, one of the truths of this investigation demonstrates that faculty attitudes toward curriculum and instruction are different. Such discriminating attitudes lead to an overwhelming conclusion. Not equality, but equitability is the influential concept. Equitability underscores autonomy; and autonomy, well-founded, yields integrity -- in students, in faculty, in administration, in the institution, and in all of higher education.

APPENDIX A

AN OPINION QUESTIONNAIRE

Name_____

Teaching Field_____

Directions: In the blank to the left print the letter that corresponds most nearly to what you perceive as the most appropriate answer to the question implied.

1. _____One of the most favorable situations on this campus is

   A. faculty interaction with other faculty across academic lines
   B. administrative leadership
   C. the intellectual calibre of the students
   D. appropriate allocation of time and money for innovation
   E. _____

2. _____One of the most important problems on this campus concerns

   A. student apathy
   B. faculty aloofness
   C. an irrelevant curriculum
   D. administrative arbitrariness
   E. _____

3. _____The typical student at this university is characterized as

   A. a good student
   B. not college material
   C. having goals which are in accord with his abilities
   D. conforming to the campus climate
   E._____

4. _____Student adequacy in my teaching field is judged by

   A. having a command of the factual data
   B. being able to conceptualize from the facts
   C. having a command of the discipline's mode of inquiry
   D. being able to communicate
   E. _____

5. _____The least capable students in my teaching field may be described as

   A. not majoring in the field
   B. lazy and indifferent toward the subject matter
   C. not college material
   D. intellectually pedestrian
   E. _____

6. _____The professor's role is one of

A. teaching
B. research
C. service
D. political and social leadership
E. _____

7. _____Good college teaching is characterized by

A. lecturing clearly so that class notes are easy to take
B. small classes
C. the accessibility of faculty to students
D. the popularity of a faculty member
E. _____

8. _____Objectivity in testing and evaluation involves the teacher's

A. having a clear statement of goals
B. telling a student what he might do in order to demonstrate understanding
C. both A and B
D. neither A nor B
E. _____

9. _____The curriculum is least relevant when

A. it is teacher-centered rather than student-centered
B. it does not serve society's needs
C. it is dictated solely by society's needs
D. it does not lead to a career goal
E. _____

10. _____The curriculum is most relevant when

A. it develops a positive self-concept
B. it leads to a career goal
C. it causes the student to synthesize from diverse sources
D. it fosters social mobility
E. _____

11. _____The term "curriculum means

A. the total college experience and impact
B. a series of planned programs leading to a career goal
C. any sequence of academic courses
D. a university's organization of education as a whole
E. _____

(The next two sets of questions ask for personal data. Be assured that we shall treat these data with appropriate confidentiality.)

12. Within the past three years have you

A. Been the sole author of a book? Yes_____ No_____

B. Collaborated on a book? Yes_____ No_____

C. Written a chapter for a book? Yes_____ No_____

D. Published one or more articles in a professional journal? Yes_____ No_____

(If "yes" how many? _____)

13. Within the past three years have you

A. Administered an evaluative instrument about your teaching to the students in your classes?

Yes_____ No_____

B. Utilized the results of these evaluations in your teaching?

Yes_____ No_____

C. Received any ratings of your teaching by an administrator?

Yes_____ No_____

If "yes", check appropriate blank _____departmental administrator
_____College or school administrator

D. Achieved any honors for outstanding teaching?

Yes_____ No_____

APPENDIX B

TAPED INTERVIEW SESSIONS

List of Questions Asked

1. How would you describe your rapport with students?
2. What teaching techniques do you use in your classes?
3. Do you discuss teaching techniques with your colleagues? Would you tell me about this?
4. How would you define the term "curriculum"?
5. How would you describe the concept of time in metaphorical terms?

A FOLLOW-UP

To:

Dr. Dianne S. Peters
Dept. of Higher Education
Campus Mail

Name _____

Teaching Field _____

Those faculty who often socialize with students (e.g. have coffee with them in the student union) are:

	1	2	3	4	5	6	7	
informed								uninformed
desirable								undesirable
closed-minded								open-minded
rational								irrational
timid								bold
unpredictable								predictable
impractical								practical
extroverted								introverted
logical								illogical
warm								cold
aggressive								unaggressive
knowledgeable								unknowledgeable
sensible								not sensible
involved								uninvolved
insensitive								sensitive
crude								gracious
unstable								stable
poor communicator								good communicator
reasonable								unreasonable
weak								strong
organized								disorganized
wise								foolish
decisive								indecisive
rejecting								accepting
energetic								tired
passive								active
effective								ineffective
expert								ignorant
tense								relaxed
cheerful								gloomy

Those faculty who include behavioral objectives and student evaluation of teaching in planning their courses are:

	1	2	3	4	5	6	7	
closed-minded								open-minded
indecisive								decisive
accepting								rejecting
extroverted								introverted
active								passive
sensitive								insensitive
ignorant								expert
ineffective								effective
tense								relaxed
cold								warm
rational								irrational
gloomy								cheerful
desirable								undesirable
disorganized								organized
wise								foolish
knowledgeable								unknowledgeable
timid								bold
unpredictable								predictable
impractical								practical
unaggressive								aggressive
tired								energetic
unreasonable								reasonable
illogical								logical
crude								gracious
sensible								not sensible
stable								unstable
good communicator								poor communicator
uninvolved								involved
informed								uninformed
weak								strong

All other things being equal, those faculty who are most likely to favor change (e.g. in curriculum, calendar, programmed learning, etc.) are:

	1	2	3	4	5	6	7	
extroverted								introverted
organized								disorganized
rejecting								accepting
logical								illogical
strong								weak
unknowledgeable								knowledgeable
active								passive
crude								gracious
poor communicator								good communicator
unstable								stable
wise								foolish
cheerful								gloomy
bold								timid
irrational								rational
tired								energetic
closed-minded								open-minded
unreasonable								reasonable
predictable								unpredictable
warm								cold
involved								uninvolved
relaxed								tense
impractical								practical
sensitive								insensitive
undesirable								desirable
expert								ignorant
ineffective								effective
aggressive								unaggressive
not sensible								sensible
indecisive								decisive
informed								uninformed

APPENDIX D

THE LINGUISTIC VARIABLES

Number of sentences

Average number of words per sentence

Total number of nouns

Total number of verbs

Total number of adjectives

Verb-adjective ratio

Type-token ratio

Percentage of Cognitive Verbs

Number of numerical expressions

Number of negative expressions

Number of positive markers

Number of contractions

Number of prepositions

Number of demonstrative pronouns

Total number of personal pronouns

Number of first person pronouns, singular and plural

Percentage of first person pronouns, singular and plural

Number of third person pronouns, singular and plural

Percentage of third person pronouns, singular and plural

Number of second person pronouns

Percentage of second person pronouns

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